BROAD BAND AND MULTI-BAND ANTENNAS

ABSTRACT OF THE DISCLOSURE

Antenna systems (200, 1300, 1500, 1900, 2000, 2400) comprise a dielectric resonator antenna (210) in the shape of a parallelepiped with right angle corners. The thickness (T) of the dielectric resonator antenna (210) is chosen to be less than the length and height. The antenna systems (200, 1300, 1500, 1900, 2000, 2400) provide have broad band response that is attributed to two or more resonant modes that have center frequencies that are closely spaced in frequency relative to their bandwidths. Additional pass bands can be obtained by placing a conductive strip (1302) along an edge of the dielectric resonator 210. The passband associated with the conductive strip (1302) can be lowered in frequency by capacitively loading the conductive strip (1302). An additional passband can also be obtained by coupling a metal ribbon (2012) to a feed in microstrip (206, 2002) and to the dielectric resonator antenna (210).